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ORIGINAL(57)
3-18-02
SCUNITED STATES DISTRICT COURT
FOR THE MIDDLE DISTRICT OF PENNSYLVANIA

GREENE/GUILFORD ENVIRONMENTAL
ASSOCIATION, a non-profit
Corporation incorporated under the
laws of the Commonwealth of
Pennsylvania, CITIZENS FOR PLANNED
COMMUNITY GROWTH, an unincorporated
association organized under the
laws of the Commonwealth of
Pennsylvania, PAUL B. AMBROSE,
JOHN G. ENDERS, CHARLES F.
RAHAUSER, BETSY RAHAUSER, DOUGLAS
A. WARNOCK, U.X. VAGNERINI, THOMAS
W. BUNDY, STEPHEN P. BUCHER,
ROGER J. ROBERTSON, JAMES A.
STRITE, JR., DAVID A. GUTHRIE,
Plaintiffs,

v.

KEN WYKLE, Administrator, Federal
Highway Administration, ROBERT
GATZ, Federal Highway
Administration,
Defendants,

and

BRADLEY L. MALLORY, Secretary for
The Department of Transportation,
Commonwealth of Pennsylvania,
Intervenor

CIVIL ACTION NO.
1:CV-01-0910

(Judge Rambo)

FILED
HARRISBURG, PA
MAR 15 2002
MARY E. D'ANDREA, CLERK
Per Deputy Clerk

DECLARATION OF MARTIN T. SHORTALL

Martin T. Shortall, declares and says:

1. I am the Chief for the Information System Planning and Consulting Division of the Bureau of Information Systems in the Pennsylvania Department of Transportation ("PennDOT").

2. As the Chief for the Information System Planning and

Consulting Division, I am in charge of client/server network support. I have held this position for the past four years.

3. Since PennDOT has operated a network, each day at approximately 6:00 p.m., PennDOT backs-up its exchange server (which includes the e-mails) and places the back-up on magnetic media. The system is backed-up from 6:00 p.m. to 6:00 a.m.

4. A search could be made of these back-ups to retrieve deleted e-mails.

5. E-mails that were received after an individual's mailbox was backed up and completely deleted prior to the next evening's backup would not be on the backups. For example, an e-mail may be received at 7:00 p.m. by an individual's mailbox that has already been backed-up. If this e-mail is opened, deleted from the inbox, and subsequently deleted from the deleted folder prior to the next nightly backup, this e-mail would not be on any of the backups.

6. A search of this nature would be extremely costly in terms of time and money. See Exhibit "A".

7. Backups are available for exchange server 1 from July 25, 2000 to the present and for exchange server 2 from April 23, 2001 to the present.

8. The search for deleted e-mails requires two steps to be performed. Step 1 is to restore a single day from the backup. Step 2 is to search that restored day for e-mails.

9. The process is repeated for each day that has been backed-up.

10. The total number of days that would need to be searched is 404: 338 days for server 1 (from July 25, 2000 to June 28, 2001) and 66 days for server 2 (from April 23, 2001 to June 28, 2001).

11. The time to restore the server would take approximately 4 hours for each day. The restoration must be for all PennDOT mailboxes saved on that day and cannot be limited to a select list of mailboxes.

12. The estimate of time to restore each day was calculated based on previous experiences. A PennDOT exchange server crashed which required the system to be restored to the

last backup performed. Furthermore, when the system was setup, initial testing was conducted to see if the files could be restored from the backup.

13. The time to restore the server may take longer than 4 hours. The backups are stored off-site at the State Hospital (also known as the Willow Oak Complex). The backups must be transferred electronically from the State Hospital via a data circuit. This data circuit is shared by many of the Commonwealth agencies to send and retrieve information. Therefore, the restore may take longer than 4 hours depending upon the use of the network by PennDOT and other agencies. For example, during tax season, the Pennsylvania Department of Revenue would be using this network extensively to transfer data, which could affect the speed at which PennDOT receives its backups.

14. Once that day is restored, if the search is limited to a specified list of PennDOT personnel, the time to search the restored day for the e-mails regarding the I-81 Interchange project would take approximately 2 hours for each day restored.

15. A potential additional cost would be for the use of software. Additional software is about to be released to the marketplace to help conduct the searches once the server is restored, which would cost \$16,470 for six months of use if e-mail is still being retrieved after July, 2002, i.e., PennDOT only has a license to use the software, if released, until July, 2002. But, at the present time, the software is unavailable. This cost was not added into the total cost identified in paragraph 20 of this Declaration.

16. Then, approximately 2 hours would be needed to tear down the server to get it ready for the next restore.

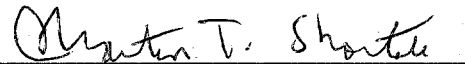
17. For each day, approximately 8 hours would be needed to retrieve the e-mails (restore, search, and breakdown), making the total hours needed to complete all 404 days to be approximately 3232 hours. Using two 8 hour shifts, it would take 202 days to complete the retrieval of e-mails. See Exhibit "A".

18. The complete process (restore, search, and breakdown) would cost approximately \$135,138.00 in labor. Labor cost estimates do not include overtime considerations. See Exhibit "A".

19. In addition, PennDOT would have to purchase an additional server to retrieve these e-mails, which would cost \$35,820.00.

20. The total cost to search the backups for e-mails is approximately \$170,958.00. See Exhibit "A".

I declare under penalty of perjury and pursuant to 28 U.S.C. 1746 that the foregoing is true and correct. Executed on this 14th day of March, 2002.


Martin T. Shortall

**Estimated Time To Restore
PennDOT Email Servers**

03/12/02

Server	Start Date	End Date	Total Days to be Restored	
PDOTEXCHNT01	7/25/2000	6/28/2001	338	
PDOTEXCHNT02	4/23/2001	6/28/2001	66	
			404	
	Processing Hours to restore	Setup time between runs	Search time for each server	Total Restore Time
	4	2	2	
Total Hours to process	1616	808	808	3232
Man Hours to Process	202	808	808	1818
	Cost per Man Hour	Total Cost per function		
Processing to Restore	\$95.00	\$19,190.00		
Setup Times between Runs (90%). Once trained, this level will be doing the setup of the server.	\$95.00	\$69,084.00		
Setup Times between Runs (10%). This is training another person and troubleshooting.	\$130.00	\$10,504.00		
Search Time for Server	\$45.00	\$36,360.00		
Total Manhour Costs		\$135,138.00		
Server Costs	\$35,820.00			
Man hour Costs	\$135,138.00			
Total Costs	\$170,958.00			\$170,958.00

Exhibit "A"